

REMARKS

Claims 1-8 are all the claims pending in the application. The specification, Fig. 1 and claims 1, 7 and 8 have been amended for purposes of clarity.

Entry of the above amendments is respectfully requested.

Initially, since the PTO should have received a copy of the certified copy of the priority document from the International Bureau, it is respectfully requested that the Examiner confirm receipt of the priority document from the International Bureau.

On pages 2-3 of the Office Action, the Examiner indicates that Applicants elected claims 1-5 and 6-7 without traverse, and requests that Applicants affirm the election.

Applicants affirm the election of claims 1-5 and 6-7, and reserve the right to file a divisional application directed to claim 6 at a later date.

I. Objection to the Figures

In addition, on pages 3-4 of the Office Action, the Examiner indicates that the reference "30" in Figs. 1 and 2 is not mentioned in the specification.

The Examiner also objects to Figure 1 because it lacks directional arrows for the line connecting feature 34 to the line connecting features 2 and 3; an arrow for the line over feature 26; an arrow at the bottom right of feature 26, and an arrow at the bottom right of feature 21. The Examiner objects to Figure 2 for basically the same reasons.

Applicants have amended page 9 of the specification to include the reference to "30". In addition, Applicants have amended Fig. 1 so that so that the line inadvertently touching feature 26 and 21 is deleted. In addition, Applicants have inserted a line from feature 31 to the line connecting features 2 and 3 (which does not touch features

21 and 26). Also, Applicants have added appropriate directional arrows. Applicants have amended Figure 2 in a similar manner to add directional arrows. Approval of the amended drawings, including the changes marked in red, is respectfully requested.

In view of the changes to the specification and Figs. 1 and 2, Applicants respectfully request that the foregoing objection be withdrawn.

II. Objection to Claim 1

On page 4 of the Office Action, the Examiner objects to claim 1.

Applicants have amended claim 1 for purposes of clarity and as suggested by the Examiner. In view of the amendments, withdrawal of the foregoing objection is respectfully requested.

III. Rejection Under 35 U.S.C. § 112, second paragraph

On page 5 of the Office Action, claims 7 and 8 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as their invention.

The Examiner asserts that claims 7 and 8 are inherently inconsistent and confusing because they recite an ammonia concentration for the waste water which has been *conducted* to the ammonia recovery step, and also for the waste water that has had ammonia recovered from it (i.e. waste water *discharged from* the ammonia recovery step). The claim language raises the question of which of these two waste waters is being referred to.

Applicants respectfully respond as follows.

The waste water recited in claims 7 and 8 corresponds to feature 33 based on page 12, lines 16-20 of the present specification, and is waste water discharged from

the ammonia recovery step and has an ammonia content of no greater than 40 ppm. Applicants have amended claims 7 and 8 accordingly.

In view of the amendments, Applicants respectfully request that the foregoing rejection be withdrawn.

IV. Rejection Under 35 U.S.C. § 103(a)

On pages 6-8 of the Office Action, the Examiner rejects claims 1-5, 7 and 8 under 35 U.S.C. § 103(a) as being unpatentable over the Applicants' discussion of the prior art process set forth on pages 1-3 and 6 in the Applicants' specification in view of page 238 in Grant and Hackh's Chemical Dictionary (5th ed.).

Basically, the Examiner asserts that the difference between the Applicants' claims and the prior art process is that the Applicants' claims call for the *additional step* of adding a flocculating agent to the waste water after the prior art step of adding the coagulant to the waste water. Then the Examiner asserts that page 238 in Grant and Hackh's Chemical Dictionary defines flocculation as coagulation, thereby rendering obvious that a flocculant is a coagulant.

Applicants respectfully traverse this rejection for at least the following reasons.

The present invention is directed to a combustion exhaust gas treatment process which comprises adding ammonia to denitrated combustion exhaust gas to convert SO₃ and/or sulfuric acid mist to ammonium sulfate and/or ammonium hydrogen sulfate, removing the produced ammonium sulfate and/or ammonium hydrogen sulfate with dust, desulfurizing the resulting gas using an aqueous solution containing calcium carbonate, filtering the aqueous solution from the desulfurization step to separate calcium sulfate from the filtrate, and then adjusting the pH of the

filtrate to 9-12 while simultaneously adding carbon dioxide and/or an aqueous carbonic acid solution, or else adjusting the pH to 9-12 after adding carbon dioxide and/or an aqueous carbonic acid solution, adding a flocculating agent to the pH adjusted filtrate to precipitate a solid portion and separating the solid portion to form a supernatant, conducting the supernatant to a separate ammonia recovery step at which ammonia is recovered by introducing steam for distillation and concentration, and thereafter adding the recovered ammonia to the aforementioned denitrated gas.

Contrary to the Examiner's position, the difference between the present invention and the conventional process is not the additional step of adding a flocculating agent to the waste water after the prior art step of adding the coagulant to the waste water. The difference between the present invention and a conventional process is the addition of carbon dioxide or an aqueous carbonic acid solution simultaneously when adjusting the pH to 9-12 or prior to adjusting the pH (claim 1). The present specification discloses that by employing the above step, it is possible to reduce the Ca portion to under 5 ppm and thus prevent sedimentation of the Ca portion in the ammonia recovery step. *See* page 6, line 28 to page 7, line 3. The present specification does not disclose such step as being used in the conventional process. Therefore, the step of adding carbon dioxide or an aqueous carbonic acid solution simultaneously when adjusting the pH to 9-12 or prior to adjusting the pH is not taught or suggested.

Accordingly, the present invention is not unpatentable over the Applicants' discussion of the convention process set forth on pages 1-3 and 6 in the specification in view of page 238 in Grant and Hackh's Chemical Dictionary (5th ed.).

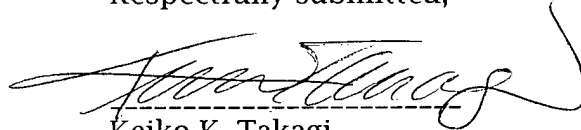
In view of the above, withdrawal of the foregoing rejection is respectfully requested.

V. **Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Keiko K. Takagi
Registration No. 47,121

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: October 21, 2003